

### REMARKS

The Applicant would like to thank Examiner Sana Al Hashemi for the telephone interview of September 22, 2006. The interview provided a valuable opportunity to clarify the proposed amendments and to understand the rejections in the Office Action.

At the time of this response claims 1-11 are pending for examination in the application and claims 12-43 stand withdrawn, having not been elected in response to an earlier restriction requirement.

Understanding the length of the original patent application, Applicant earlier filed a Substitute Specification that included a Table of Contents (see [0056] – [0061]) outlining the subsections of information, with subheadings throughout the detailed description for enabling efficient navigation by the reader. The Applicant also included a “Definitions” section (see [00386]-[00413]), which provides definitions pulled from the original application text, and puts them in one place for quick and easy access by the reader. In the remarks below, these sections and definitions in the Substitute Specification are referenced.

#### ***Information Disclosure Statement (IDS)***

The Office Action indicated that the IDS filed March 18, 2004 did not comply with 37 CFR 1.98(a)(1). In the teleconference of September 22, 2006, Examiner Al Hashemi indicated that the IDS of March 18, 2004 was, in fact, compliant. Consideration of that art is respectfully requested.

Rather, the Examiner indicated that the USPTO records indicated that an IDS was submitted on March 10, 2005 with the submission of the Substitute Specification. Applicant did not submit an IDS with the Substitute Specification – so the USPTO records appear to be in error. According, Applicant believes that the requirements of 37 CFR 1.98(a)(1) have been satisfied, and requests withdrawal of this finding of non-compliance.

**§112, 1<sup>st</sup> Para. Rejections - Enablement**

Claims 1-11 were rejected under 35 U.S.C. §112, 1<sup>st</sup> paragraph. Claim 1 is as follows:

A linked information system, comprising:

A. a set of interfaces configured for enabling communication with a plurality of media content sources over at least one network;

B. at least one storage device coupled to the set of interfaces; and

C. one or more processors coupled to the at least one storage device and set of interfaces and configured to execute a set of linked information system logic comprising:

- 1) content selection logic configured for obtaining, from the media content sources, a set of media content relevant to a field;
- 2) linking logic configured for generating a set of links between media content from the set of media content as a function of a relevance to at least one tracked theme or topic within the field; and
- 3) update logic configured for updating the set of media content, including incorporating new media content related to the at least one tracked theme or topic into the set of media content and adding, deleting or editing the set of links as a function of the new media content.

The Office Action appears to suggest that claim 1 does not meet the enablement requirement of 35 U.S.C. §112, 1<sup>st</sup> paragraph. Specifically, the Office Action appears to suggest that element “A” and element “C” of claim 1 are not enabled when the Office Action states on page 3 that:

It’s unclear to the examiner ... how the ... interfaces will be configured, what is the logic and how the logic is being configured the claim language relies on the interfaces and logic configured to obtain, link and update the content, but the specification did not define the logic not the configuration.

“The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, 242

U.S. 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable?<sup>1</sup> – quoted from the MPEP §2164.01, with emphasis added.

With respect to the present claims, the clear answer to the question posed by the Supreme Court is “No” - the experimentation needed to practice the invention is not undue or unreasonable. The specification and figures provide extensive and explicit detail with respect to interfaces and logic in claim 1.

In element A of claim 1, the present invention uses the term “interfaces” to refer to network enabled computer devices known in the art. For example, personal computers and laptop computers are used in FIGS. 1D, FIG. 3, FIG. 4 and FIG. 12 as examples of systems or devices that can be used as “interfaces” to a network (e.g., the Internet) to access content sources (e.g., web sites and databases). For example, in para. [0067] the specification states:

In particular, the preferred embodiment is engineered to function in view of current Internet protocols, with a novel implementation of existing object code, and with electronic files in the well known Hyper Text Markup Language (HTML) format.

In discussing FIGS. 3 and 4, paragraphs [00335] – [00344] clearly describe such systems for accessing content sources over a network. Several other examples of related discussion are similarly provided in the specification. All of this is well known in the art. Certainly those skilled in the art could easily connect a computer to a network and search for content, without *undue or unreasonable* experimentation. Accordingly, Applicant contends that the specification does enable the “interfaces” of claims 1-11 and reconsideration and withdrawal of this rejection under 35 U.S.C. §112, 1<sup>st</sup> para. is respectfully requested.

The Office Action also appears to suggest that the linked information system logic of element “C” of claim 1 is not enabled. Again, the question put forth by the Supreme Court is this: “is the experimentation needed to practice the invention undue or

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<sup>1</sup> Manual of Patent Examining Procedure” Edition 8 (E8), August 2001, Last Revision October 2005.

unreasonable?” And as with the interfaces of element A, the answer here is “No” – undue and unreasonable experimentation is not needed to practice the linked information system logic.

Briefly summarizing the sub-elements of element C, there are three functional logics claimed:

- 1) content selection logic;
- 2) linking logic; and
- 3) update logic.

As the present invention claims a “computer-related invention,”<sup>2</sup> each of these types of logic represents a set of functions executed by one or more processors, as stated in claim 1. The notion of computer processors executing functional logic is not new and, in fact, it is the customary way in which computers operate. In element C the logic defines the functions to be performed by the computer, as is evident by the above quote from para. [0067]. In the present case those functions are new, useful, and unobvious – as is required for patentability. But with the extensive detailed description in the present application of the functions of *content selection*, *linking* and *updating*, each of these functions can be programmed by a computer programmer of ordinary skill in the art. In fact, Section 17 of the detailed description provides details of an “XML Implementation (Embodiment).” Therefore, element C is enabled by the specification of the present application, including the figures.

A discussion of each of these three types of functional logic makes it clear that they are all enabled:

#### Content Selection Logic

As put forth in claim 1, in element C. 1) there is provided “content logic configured for obtaining, from the media content sources, a set of media content relevant to a field.”

Media content selection logic is shown and described with respect to FIG. 1C, 1D, 2, and 4, as just a few examples. One type of media content selection logic referred to in

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<sup>2</sup> See MPEP 2106.

the specification is known searching programs (or logic) that presently enable one to search the Internet and/ or databases for articles etc.. For example, the specification at para. [0068] provides that:

According to the present invention and as detailed in Figure 1D, a human editor receives media content 102 that is initially unorganized as at 100A. An example of media content 102 corresponds to several news articles A, B, and C containing information relating to a field of study, such as economics.

As another example, in para. [00339], and with respect to FIG. 4, the specification states that:

The editor is also able to browse the Internet 410 or other network for media content in electronic form and/or use other capabilities of server system 106, such as a DVD/CD ROM drive, fire wire port, or other data transfer technology to access electronic media content. Browsing the Internet 410 allows the editor to access various online databases 412A, 412B, and 412C containing electronic media content and thus determine availability of the electronic media content on the Internet 410 for a user to access at leisure.

Thus, the content selection logic referred to in claim 1, element C. 1) could take the form of Internet browsing logic and programs that have been publicly known and available for some time. Certainly, this element of claim 1 does not require undue or unreasonable experimentation by one of skill in the art. As such, Applicant contends that element C. 1) of claim 1 is enabled.

Additionally, in the section of the specification entitled *Selecting Media Content (Information) Sources*, FIGS. 19-21 depict an embodiment of an approach for selecting the media content sources and for content selection, see for example FIG. 19 and FIG. 20. FIG. 20 shows a process for assembling media publication sources. First, media information sources are listed at 2000, criteria are set at 2002 and listed sources are matched against the criteria. Examples of criteria include quality, reliability and accuracy of the information from that source. Global coverage is another example of a possible criteria. Examples of selected publications can include the Wall Street Journal (U.S., Europe, and Asia editions), Wall Street Journal online, Business Week, Business Week

online, New York Times, and The Economist. These represent sources from which media content can be obtained using the content selection logic, and are used in the illustrative embodiment within the specification. At step 2016 in FIG. 20 an update is made of selected sources and of the prior criteria to check if it needs to be modified - as referred to in claim element C. 3) in claim 1.

FIG. 19 shows how the actual process of information selection takes place. Information from the selected sources is scanned at 1900 with some goal in mind. This goal is based on an intuitive or objective theme. An intuitive theme is a theme in its early nascent developmental stage when it's not formalized or established. It helps to track this theme related information early so that the information is stored and accessible and the trail of articles that follow on subsequent days and weeks in selected media publications is more easily followed. An objective theme is a theme which is established and formalized.

The result of a continuous selection of news and media articles over days, weeks and months in real time is shown in FIG. 17 where a Footprint Trail is the result at 1708. Section V ( [00386] to [00413] ) provides the Definitions of terms used in this invention. Footprint is defined in [00394] as "how particular information has developed up to a current point in time. As new information is received, a footprint trail is developed, wherein information are analyzed, selected and linked in relation to questions, and/or decisions invoked by previously received, selected and linked information. This process occurs in real time..." An example of a Footprint Trail is shown in [00204], [00205], [00206]. It is a Footprint Trail on ethics and corporate governance issue.

FIG. 36 shows another way information selection takes place. This is Hypothesis based selection. At 3600 a Hypothesis is stated. Hypothesis is defined in [00395] as "important patterns in information that are evident and supported by facts and expert opinion are stated or worded carefully as Hypotheses. The information to support or refute is followed and selected as it appears on a daily basis." Another way article selection from media publications takes place is for the purposes of generating an Insight Link - based on the known expertise of an author or source. (See, for example, para. [00398])

Again, as illustrated above, element C. 1) of claim 1 relating to content selection logic is enabled. Known electronic devices can interface to the Internet (or other networks) to search for documents from web sites or databases. Accordingly, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. §112, 1<sup>st</sup> para. to this element.

### Linking Logic

As put forth in claim 1, in element C. 2) there is provided “linking logic configured for generating a set of links between media content from the set of media content as a function of a relevance to at least one tracked theme or topic within the field.”

This logic implements a set of functions to be executed by one or more processors. With the description of the linking functions in the detailed description of the specification, a computer programmer of ordinary skill in the art could program the linking logic without undue or unreasonable experimentation.

Linking logic is shown and described with respect to FIG. 1C, 1D, 2, 4, and 5, as just a few examples. In paragraph [0070] an “Example of Linking” outlines linking among several articles according to a relevance. In para. [0093] there is discussion of links (or linkages) being “hyperlinks to electronic files containing the content.” In fact, the specification includes many references to such links between content. In other words, content can be linked with HTML links, known in the art. In paras. [0078]-[0080] primary and secondary links are discussed in detail, along with relevance and topics. Links can be developed between articles, e.g., hyperlinks.

Beyond hyperlinks, media is linked within the data structures of the present invention. For example, in the illustrative embodiment, FIG. 5 depicts interrelated data objects that can be used to implement links in relation to topics. FIG. 6 provides a diagram relating to search and retrieval of such linked data objects. And FIG. 7 is a screen shot that can be used to view linked media content, and the links themselves. This functionally descriptive information could be used by a programmer of ordinary skill in the art to program the linking logic of claim 1, element C. 2).

Further insight on linkages can be appreciated with reference to Figure 23, which shows how linkages at the first level are established at 2300. These are the primary links where the information is linked by the subject matter from the title and the first paragraph of the article. Primary links are defined in para. [00402] as links “obvious based on a direct impact of the information that is evident on its face. For example, an article can claim to be relevant to a particular question, issue or decision, in its title, opening paragraph.” A user can identify relationships among content through a graphical user interface and create the links.

At 2302 the second level linkages are identified. Second level linkages are made from the content and detail of the information pieces within the content (e.g., article). This is defined in para. [00407] “secondary (second level) links may be thought of as links that are not obvious from the study of the information on its face. Thus, where knowledge of an article impacts another article by contradicting, confirming, or otherwise affecting a reinterpretation of the article, a link developed to the other article, constitutes a second level link.” Like primary links above, a user could create secondary links between content, e.g., between two or more articles (as discussed above).

At 2304 in FIG. 23 the linkage process takes place by delineating the underlying dynamics of the selected articles. These underlying Dynamics are referred to as the Internal Dynamics. Internal Dynamics is defined in [00399], as “the underlying dynamics of intelligent streams of information that carry meaning at many levels, and which are continuously changing, evolving, and being shaped by the flow of events and/or new insights or discoveries.” A footprint trail of articles with linkages collected in real time on different dates on a potent theme or issue is a intelligent stream of information and will have its own internal dynamic as it changes and evolves continuously in real time. At 2308 the linkage is done by delineating the metamorphosing dynamics and at 2314 the concealed dynamics. These are forms of internal dynamics of the selected articles. Metamorphosing dynamics refer to the transformational dynamics or transformational changes within a set of selected articles or a footprint trail of articles. These transformational changes result in a change in direction in news developments that can be identified in real time as information is received. An



example of such a shift is shown in [00119] and [00120] for oil supplies and oil prices with a shift to greater reliance on oil outside the Middle East.

As an example, Table 1 of the specification, in paragraph [00117], shows linkages using the example of the U.S. Budget Deficit, and a stream of information (news and commentary articles on this theme or issue in business media publications).

1) A 1st level linkage is shown for the information stream corresponding to the period of October 2001-May 2002 for selected articles appearing during that period. At the first level linkage these articles were about tax cuts and how they would widen the budget deficit. At this level they were also about the ramped up defense budget allocation and the farm subsidy, as shown in Table 1.

2) At the 2nd level linkage the articles in this information stream were about Dollar-Euro exchange rate and the budget deficit. Further at this second level linkage there was an article about how the U.S. budget and current account deficits were being financed by inflows from other countries of about \$2 billion a day.

In fact, the specification is replete with discussion of links and linkages and tangible examples of the same. These links can be created, for example, as hyperlinks (known in the art). With the detail and examples provided in the specification, including the figures, a programmer of ordinary skill in art. Thus, as illustrated above, element C. 2) of claim 1 relating to linking logic is enabled. Accordingly, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. §112, 1<sup>st</sup> paragraph to this element.

#### Update Logic

As put forth in claim 1, element C. 3) there is provided “update logic configured for updating the set of media content, including incorporating new media content related to the at least one tracked theme or topic into the set of media content and adding, deleting or editing the set of links as a function of the new media content.”

This logic implements a set of functions to be executed by one or more processors. With the description of the updating functions in the detailed description of the specification, a computer programmer of ordinary skill in the art could program the

linking logic without undue or unreasonable experimentation. As a general principle, if the content can be selected and linked, as discussed above, the content and links can be updated using the same logic, as discussed above. Table 1 shows links for a theme.

For instance, the detailed description relating to the *content selection logic* discussed above with respect to element C. 1) of claim 1 also covered how new media content is incorporated and how the media content is updated. In fact, the different methods of selection, by intuitive and objective theme, by developing a *footprint trail*, use of *hypotheses* and modified hypotheses for selection, use of the *Behavioral Index (BLX)* topics for selection, *insight link* selection, all cover the incorporation and updating of media content. These are each clearly detailed throughout the specification, including the 51 sheets of figures.

As an example, Section I-12 (at [0057]) of the application, entitled *Selecting Media Content (Information) Sources* (at [00105]-[00112]), includes the discussion related to FIGS. 19-21. These figures depict functional diagram that cover the selection of content and how updates are accomplished. These figures address determination of relevance, absorption of new information and linkages, tracking relative to criteria, and deletion of obsolete information. A computer programmer could program the update logic using such information.

In the area of updating logic for adding, deleting or editing the set of links, the discussion and referenced sections above relating to *linking logic* also cover how links can be developed and added in real time, and how links can be continually edited, as appropriate, in real time. As an example, the detailed description discusses linking and updating in paragraphs [0071]-[0074], and depicts a top-level process in FIG. 2. Section 4 (*Primary & Secondary Links*) and Section 5 (*Internal Dynamics*), i.e., paragraphs. [0078]-[0085], further discuss in detail the updating that can take place with respect to links and content. The discussion on primary and secondary links, on linking by underlying dynamics with detailed examples, linking for internal dynamics, metamorphosing dynamics and concealed dynamics, show the continually evolving linking process at work to update content.

The update functions are described in sufficient detail to allow a programmer to write code to execute the logic they embody. Various functional diagrams have been provided and explained in detail, with examples in the specification. Thus, element C. 3) of claim 1 relating to update logic is enabled. Accordingly, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. §112, 1<sup>st</sup> para to this element.

As discussed above, each element of claim 1 is enabled. Given the specification, including the functional flow diagrams, network diagrams, data structure diagrams and screen shots, a programmer could practice the invention without undue or unreasonable experimentation. Thus, Applicant respectfully request that the lack of enablement rejection under 35 U.S.C. §112, 1<sup>st</sup> paragraph be reconsidered and withdrawn for claim 1.

Claims 2-11 depend from claim 1. The rejections, as described in the Office Action, related to elements of claim 1, not its dependent claims 2-11. Thus, Applicant respectfully request that the lack of enablement rejection under 35 U.S.C. §112, 1<sup>st</sup> paragraph be reconsidered and withdrawn for claims 2-11.

#### ***§112, 1<sup>st</sup> Para. Rejections- Written Description***

Additionally, the Office Action rejected claims 1-11 asserting that the written requirement of 35 U.S.C. §112, 1<sup>st</sup> paragraph was not satisfied. Specifically, page 3 of the Office Action states that:

... The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the invention(s), at the time the application was filed, had possession of the claimed invention. The interfaces configured, and the logic configured were not defined in the original filed specification and therefore treated to be new matter.

As discussed above, each element of claim 1 is well and thoroughly supported by the specification. Specific references to figures and paragraphs in the detailed description were indicated for the interfaces of element A and the logic of element C of claim 1. As such, Applicant contends the prior amendments to the claims did not introduce new matter, but rather claimed subject matter that always existed in the present application.

Accordingly, Applicant respectfully requests that the written description rejection under 35 U.S.C. §112, 1<sup>st</sup> paragraph be reconsidered and withdrawn for claim 1.

Claims 2-11 depend from claim 1. The rejections, as described in the Office Action, related to elements of claim 1, not its dependent claims 2-11. Thus, Applicant respectfully request that the written description rejection under 35 U.S.C. §112, 1<sup>st</sup> paragraph be reconsidered and withdrawn for claims 2-11.

***§112, 2<sup>nd</sup> Para. Rejections- Indefinite***

Additionally, the Office Action rejected claims 1-11 for indefiniteness under 35 U.S.C. §112, 2<sup>nd</sup> paragraph. Specifically, page 4 of the Office Action states that:

... The claimed invention has been rejected since it's vague and indefinite since the specification did not provide and support for the claimed invention.

As discussed above, claim 1 is well supported by the specification. Specific references in the detailed description and figures were cited showing the elements of claim 1. Accordingly, the Applicant contends that claim 1 particularly points out and distinctly claims the invention. Applicant respectfully requests reconsideration and withdrawal of the rejection to claim 1 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph.

Claims 2-11 depend from claim 1. There is no particular indication as to what part of any of claims 1-11 are not supported. The Applicant therefore assumes that, like the other rejections in the Office Action, the elements of claim 1 were at issue. Thus, the Applicant respectfully requests reconsideration and withdrawal of the rejections to claims 2-11 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph.

***Closing Remarks***


In view of the foregoing remarks, it is believed that all claims pending in the application are in condition for allowance, and such allowance is respectfully solicited. If a telephone conference will expedite prosecution of the application, the Examiner is invited to telephone the undersigned.

Application No.: 10/740,201  
Amendment dated: October 2, 2006  
Reply to Office Action of April 4, 2006  
Attorney Docket No. INT-0003

Authorization is hereby given to charge Deposit Account No. 501798 for all fees due with this response.

Respectfully submitted,

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